

**BY ORDER OF THE CHIEF,
NATIONAL GUARD BUREAU**



MANPOWER STANDARD 531100

1 SEPTEMBER 2004

Manpower Standard

BIOENVIRONMENTAL ENGINEERING

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This Air National Guard Manpower Standard (ANGMS) quantifies the manpower required to accomplish the tasks described in the work center description (WCD) for varying levels of workload in the Bioenvironmental Engineering function whose mission is to ensure worker safety/protection from injury/illness and protection of the environment. This standard applies to all ANG wings. This standard does not apply to Combat Readiness Training Centers (CRTCs). This standard is applicable to peacetime operations only. The Air National Guard (ANG) is authority for the approval and publication of ANG Manpower Standards. Air Force (AF) and ANG directives contain policy and procedural guidance for the operation of the Bioenvironmental Engineering function. This standard was developed in accordance with AF Instruction (AFI) 38-201, *Determining Manpower Requirements*, and AF Manual (AFMAN) 38-208, Volume 1, *Air Force Management Engineering Program (MEP) - Processes*, and AFMAN 38-208, Volume 2, *Air Force Management Engineering Program (MEP) - Quantification Tools*. Send comments and suggested improvements on AF IMT 847, *Recommendation for Change of Publication*, through channels, to ANG, Management Engineering (ANG/XPME/Operating Location TN [OLTN]), 106 Briscoe Drive, McGhee Tyson ANG Base, TN 37777-6283.

SUMMARY OF REVISIONS

This document is substantially revised and must be completely reviewed.

1.	STANDARD DATA	3
2.	APPLICATION INSTRUCTIONS	3
3.	STATEMENT OF CONDITIONS	3

Attachment 1 -	GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION	4
Attachment 2 -	WORK CENTER DESCRIPTION BIOENVIRONMENTAL ENGINEERING	8
Attachment 3 -	MANPOWER TABLE	21
Attachment 4 -	VARIANCE BASE OPERATING SUPPORT	22
Attachment 5 -	VARIANCE NORTHEAST TANKER TASK FORCE SUPPORT	23

1 STANDARD DATA.

1.1. Approval Date: 23 June 2004.

1.2. Man-hour Data Source. Staffing Pattern. The Operational Audit (historical record and technical estimate) technique was used to determine monthly man-hours; however, measured man-hours were found to have no correlation to a programmable workload factor. Monthly man-hours were reviewed by Functional Representatives. Based on the manpower range of the measured man-hours, a Staffing Pattern was developed to determine manpower requirements for this function.

1.3. Man-hour Equation. $Y = 2$ (Constant Manning).

1.4. Points of Contact.

1.4.1. Functional: Maj Kirk Phillips and SMSgt Greg Wills, ANG/SGOB

1.4.2. Manpower: Mrs. Dora Hooks, ANG/XPME/OLTN

2. APPLICATION INSTRUCTIONS:

2.1. Step 1. Apply the man-hour equation at [Paragraph 1.3](#).

2.2. Step 2. Apply the variance in [Attachment 4](#).

2.2. Step 3. Apply the variance in [Attachment 5](#).

3. STATEMENT OF CONDITIONS. The normal hours of operation for this function are 80 hours per two-week period. Units work numerous schedules, from the normal 40 hours per week to alternate work schedules ranging from four ten-hour days per week to eight nine-hour days and one eight-hour day per two-week period. There are no other standard of living constraints that impact the daily operation of this work center.

DANIEL JAMES III, Lieutenant General, USAF
Director, Air National Guard

Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION***References*

AFI 38-201, *Determining Manpower Requirements*

AFMAN 38-208, Volume 1, *Air Force Management Engineering Program (MEP) - Processes*

AFMAN 38-208, Volume 2, *Air Force Management Engineering Program (MEP) - Quantification Tools*

AFMAN 10-2602, *Nuclear, Biological, Chemical and Conventional (NBCC) Defense Operations and Standards*

AFOSH 48-137, *Respiratory Protection Program*

AFOSH 48-148, *Ionizing Radiation Program*

AFOSH 161-21, *Hazard Communication Standard*

AFI 32-7086, *Hazardous Materials Management*

AFI 38-201, *Determining Manpower Requirements*

AFI 48-125, *The U.S. Air Force Personnel Dosimetry Program*

AFI 48-144, *Safe Drinking Water Act*

AFI 48-145, *Occupational Health Program*

29 Code of Federal Regulations 1910.1200, *Hazard Communication*

Abbreviations and Acronyms

ACES - Automated Civil Engineering System

ACES-EM - Automated Civil Engineering System-Environmental Management

AFIOH - Air Force Institute for Occupational Health

AFOSH - Air Force Occupational Safety Hazard

ALARA - As Low As Reasonably Achievable

AMS - Aerospace Medical Council

ANG - Air National Guard

ANGMS - Air National Guard Manpower Standard

BRAC - Base Realignment and Closure Committee

CCS - Command Core System

CE - Civil Engineering

CONOPS - Concept of Operations

CRTC - Combat Readiness Training Center

DD - Department of Defense

DOEHRS - Defense Occupational Environmental Health Readiness System

DRMO - Defense Reutilization and Marketing Office

EA - Environmental Assessment

EDP - Environmental Differential Pay

EESOH - Enterprise Environmental Safety Occupational Health

EMIS - Environmental Management Information System

EPA - Environmental Protection Agency

EPC - Environmental Protection Committee

EPCRA - Emergency Planning and Community Right-To-Know Act

ESOH CAMP - Environmental Safety and Occupational Health Compliance Assessment and Management Program

FDA - Food and Drug Administration

FSTR - Full Spectrum Threat Response

HAZCOM - Hazardous Communication

HAZMAT - Hazardous Material

HAZWOPER - Hazardous Waste Operations and Emergency Response

HHF - Health Hazard Flag

HM - Hazardous Material

IAW - In Accordance With

IEX - Issue Exception

IRP - Installation Restoration Program

LDR - Land Disposal Restriction

MAJCOM - Major Command

MSDS - Material Safety Data Sheet

NBCC - Nuclear, Biological, Chemical and Conventional

NPDES - National Pollutant Discharge Elimination System
OSHA - Occupational Safety and Health Administration
PMEL - Precision Measurement Equipment Laboratory
PPC - Personal Protective Clothing
PPE - Personal Protective Equipment
QNFT - Quantitative Fit Test
RAC - Risk Assessment Code
RF - Radio Frequency
RSO - Radiation Safety Officer
SARA III - Superfund Amendment and Reauthorization Act III
SBSS - Standard Base Supply System
SG - Surgeon General
SIOP - Single Integrated Operational Plan
TAFR - Team Aerospace Funding Requirement
TLD - Thermoluminescent Dosimetry
TO - Technical Order
TDY - Temporary Detached Duty
UTA - Unit Training Assembly
WCD - Work Center Description
WVA - Water Vulnerability Assessment

Terms

Air National Guard Manpower Standard (ANGMS). A numbered, specialized publication that quantifies manpower requirements for a work center. Also includes approved variances. See AFI 38-201.

Historical Record. Documented past work performance of the work center.

Man-hour. A unit of measuring work. It is equivalent to one person working at a normal pace for 60 minutes, two people working at a normal pace for 30 minutes, or a similar combination of people working at a normal pace for a period of time equal to 60 minutes.

Manpower Standard. The basic tool used to determine the minimum level of manpower required to support a function. It is a quantitative expression that represents a work center's man-hour requirements in response to varying levels of workload.

Operational Audit. A work measurement method consisting of one or a combination of the following techniques: good operator timing, historical records, technical estimate, standard time, and directed requirement.

Programmable Workload Factor. A workload factor (WLF) and definition that matches a program variable found in programming documents that allows the WLF to be programmable (a resource identified in a programming document).

Staffing Pattern. Constant manpower.

Technical Estimate. A determination of the standard hours required for a given task, based on an estimate by individuals who are technically and professionally competent to judge the time required.

Work Center Description. A format that shows work center responsibilities structured for easy measurement of work categories, tasks and subtasks.

Variance. A condition that exists that either adds to or subtracts from the core workload, or impacts the way the work is performed. A variance can be the result of environmental, mission or technological differences, and can be either positive or negative.

Attachment 2**WORK CENTER DESCRIPTION
BIOENVIRONMENTAL ENGINEERING****A2.1. DIRECT:**

A2.1.1. CASE FILE DOCUMENTATION. Prepares industrial facility case file on installation industrial shop in accordance with (IAW) Air Force Instruction (AFI) 48-145, *Occupational Health Program*.

A2.1.2. SHOP SURVEY. Conducts special, periodic, and routine survey. Documents survey into automated system such as Defense Occupational Environmental Health Readiness System (DOEHRS), Command Core System (CCS) or Automated Civil Engineering System (ACES). Prints selected forms and places into the shop folder.

A2.1.2.1. PREPARES FOR SURVEY. Reviews applicable guidance, previous work and technical data. Determines scope of survey based on federal, state and local requirements.

A2.1.2.2. CONDUCTS PRELIMINARY SURVEY:

A2.1.2.2.1. CONDUCTS OPENING CONFERENCE, WALK-THROUGH SURVEY AND SANITATION INSPECTION SURVEY. Identifies potential health hazard. Collects employee, operational, and physical layout data. Reviews and organizes data.

A2.1.2.2.2. DETERMINES REQUIREMENT AND INITIATES INVENTORY VIA ENVIRONMENTAL MANAGEMENT INFORMATION SYSTEM (EMIS), ACES-ENVIRONMENTAL MANAGEMENT (ACES-EM) OR ENTERPRISE ENVIRONMENTAL SAFETY OCCUPATIONAL HEALTH (EESOH) DATABASE:

A2.1.2.2.2.1. DETERMINES REQUIREMENT AND INITIATES CHEMICAL INVENTORY.

A2.1.2.2.2.2. DETERMINES REQUIREMENT AND INITIATES PHYSICAL HAZARD INVENTORY.

A2.1.2.3. IDENTIFIES KEY RISK. Determines shop measurement strategy required to establish baseline data on prevailing work environment.

A2.1.2.4. PREPARES SHOP DIAGRAM TO IDENTIFY LOCATION OF HAZARDOUS OPERATION.

A2.1.2.5. PERFORMS HAZARD ASSESSMENT AND SURVEY. Performs chemical hazard assessment by evaluating existing data located in the workplace and found in basewide databases.

A2.1.2.5.1. OBTAINS CHEMICAL HAZARD MATERIAL SAFETY DATA SHEET (MSDS) INFORMATION.

A2.1.2.5.2. ENSURES HAZARDOUS MATERIAL DATA ARE INCLUDED IN THE EMIS, ACES-EM OR EESOH PROGRAM.

A2.1.2.5.3. REVIEWS AND VALIDATES NEW HAZARDOUS MATERIAL (HAZMAT) ISSUE ON AF IMT 3952, *CHEMICAL HAZARDOUS MATERIAL REQUEST/AUTHORIZATION*. Reviews and approves issue related to hazardous material including personal protective equipment (PPE) and disposal requirement. Researches technical order (T.O.) for possible substitute (i.e., more environmentally friendly), enters cage data, manufacturer data, etc. Enters hazardous chemical information from AF IMT 3952 into AF-EMIS, ACES-EM or EESOH.

A2.1.2.5.4. FINALIZES CHEMICAL INVENTORY. In the EMIS/EESOH program, evaluates data, creates a chemical inventory and manages the HAZMAT aspect of the program. Provides work center supervisor with current approved authorization listing.

A2.1.2.5.5. DEVELOPS SAMPLING STRATEGY.

A2.1.2.5.6. PERFORMS AIR SCREENING, SHORT-TERM AND LONG-TERM SAMPLING. Obtains operational test equipment, performs calibration, conducts air sampling, performs post survey calibration and completes data sheet, log or transmittal form. Forwards sample to laboratory for analysis. Receives and interprets result. Completes survey form for inclusion in case file in CCS, ACES or DOEHRs.

A2.1.2.5.7. PERFORMS LEAD SURFACE SAMPLING. Conducts bulk and swipe sampling for suspect lead surfaces during normal maintenance operations or renovation and remodeling.

A2.1.2.6. PERFORMS PHYSICAL HAZARD ASSESSMENT:

A2.1.2.6.1. PERFORMS PRELIMINARY NOISE EVALUATION, PERSONAL NOISE DOSIMETRY AND SOUND LEVEL/OCTAVE BAND ANALYSIS. Obtains operational test equipment, performs calibration, conducts noise measurement, performs post survey calibration, completes survey form, interprets collected data and documents in case file and CCS, ACES or DOEHRs. Performs audiometric booth testing and evaluation. Gathers baseline data. Performs octave band noise analysis. Completes AF IMT 1622, *Engineering Noise Survey*, and sends letter.

A2.1.2.6.2. PERFORMS VENTILATION SURVEY. Obtains equipment and performs operational/calibration check. Conducts airflow measurement of

ventilation system. Completes evaluation forms, notifies shop of result and reports/makes recommendation to the Aerospace Medical Council (AMC) of result. (Baseline, annual and quarterly check for new system.)

A2.1.2.6.3. PERFORMS ILLUMINATION SURVEY. Obtains equipment, performs operational/calibration check and conducts illumination measurement. Completes evaluation forms, notifies shop of result and reports/makes recommendation to the AMC of result.

A2.1.2.6.4. PERFORMS HEAT/COLD STRESS SURVEY. Obtains equipment, performs operational/calibration check, conducts measurement for temperature, humidity, and air movement and completes survey form.

A2.1.2.6.5. MANAGES ERGONOMICS PROGRAM. Institutes the ergonomic program based on the best available guidance (i.e., Occupational Safety and Health Administration [OSHA], Environmental Protection Agency [EPA]). Completes evaluation form, notifies shop of result and reports/makes recommendation to the AMC of result.

A2.1.2.6.6. MANAGES RESPIRATORY PROTECTION PROGRAM. Provides program management, prepares local regulation and performs initial and annual respirator fit testing for personnel assigned to the Base Respiratory Protection Program. Monitors and determines appropriate respirator (Air Force Occupational Safety Hazard [AFOSH] Standard 48-137, *Respiratory Protection Program*). Conducts respiratory protection training.

A2.1.2.7. ACCOMPLISHES OUTBRIEFING. Outbriefs shop supervisor, union representative and employee regarding survey result, environmental condition and recommended action.

A2.1.2.8. PREPARES AND DISTRIBUTES FINAL REPORT. Prepares and distributes final report to shop supervisor and concerned agencies, maintains suspense file and briefs Wing Commander regarding potential health risk or regulatory deficiency. Completes AF Form 2755, *Master Workplace Exposure Data Summary*. Documents survey in CCS or ACES. Prints selected forms and places into the shop folder for reference.

A2.1.2.9. PERFORMS FOLLOW-UP ACTION.

A2.1.3. WORKPLACE SURVEY:

A2.1.3.1. CONDUCTS SPECIAL WORKPLACE SURVEY. Conducts workplace survey of a potential exposure to determine extent and significance. Evaluates survey request generated by base level agency. Documents survey in CCS, ACES or DOEHS. Prints selected forms and places into the shop folder for reference. (Does not include asbestos.)

A2.1.3.1.1. CONDUCTS INDOOR AIR QUALITY SURVEY (SICK BUILDING SYNDROME). Conducts screening, samples for determination of air quality, performs initial/post operation calibration and preparation/ packaging of media for shipment to analytical laboratory and collects non-biological air sample for pollutants, carbon monoxide, carbon dioxide and formaldehyde. Makes professional judgment/recommendation to Civil Engineering on quality of indoor air.

A2.1.3.1.2. CONDUCTS CHEMICAL EXPOSURE SURVEY.

A2.1.3.1.3. CONDUCTS CONFINED SPACE ENTRIES SURVEY. Operates confined space meter to include calibration, operation and annual Precision Measurement Equipment Laboratory (PMEL) certification. Performs air sampling of permitted/non-permitted confined space. Conducts confined space training along with Ground Safety.

A2.1.3.2. ESTABLISHES PERSONAL PROTECTIVE EQUIPMENT (PPE) REQUIREMENT. Identifies and mandates PPE based on specific work place exposure potential.

A2.1.3.2.1. COMPILES INVENTORY. Compiles inventory of individual work center PPE items according to task requirements with information on source of purchase and change-out criteria.

A2.1.3.2.2. RESEARCHES LIMITATIONS AND PERFORMANCE DATA. Researches limitations and performance data on types of PPE for task-specific recommendations.

A2.1.3.3. EVALUATES SPECIAL PROGRAM:

A2.1.3.3.1. EVALUATES BLOODBORNE PATHOGEN PROGRAM. Ensures proper disposal and pick up of medical waste and investigates violation.

A2.1.3.3.2. REVIEWS BASE AND SHOP HAZARD COMMUNICATION (HAZCOM) PROGRAM. Ensures compliance with AFOSH Standard 161-21, *Hazard Communication Standard*, and 29 Code of Federal Regulations 1910.1200, *Hazard Communication*. Performs process review to include the workplace-specific written HAZCOM program, MSDS, Hazardous Material (HM) inventory, labels, other forms of warning, education and training and additional duty listing/briefing.

A2.1.4. UNSCHEDULED SURVEY (ILLNESS/INJURY INVESTIGATION). Performs follow-up investigation. Reviews appropriate occupational illness/injury report to determine the need for further industrial hygiene evaluation. Coordinates with appropriate agency. Prepares and investigates AF IMT 190, *Occupational Illness/Injury Report*. Documents survey into CCS, ACES or DOEHS. Prints selected forms and places into the shop folder for reference.

A2.1.5. HEALTH HAZARD ABATEMENT. Monitors health hazard abatement.

A2.1.5.1. DETERMINES AND ASSIGNS RISK ASSESSMENT CODE (RAC) TO HEALTH HAZARD. Establishes RAC based on potential of significant health risk in relation to occupational health-related exposure. Maintains deficiency log. Prepares and submits AF IMT 457, *USAF Hazard Report*, to Safety office. Reviews AF IMT 457 from unit for comment and clarification and forwards to Safety office. Prepares and issues AF Form 1118, *Notice of Hazard*, to shop supervisor and ensures its posting. Assists shop supervisor in completing AF IMT 3, *AF Hazard Abatement Plan*, for hazard identified by RAC 1, 2, or 3. Monitors abatement of occupational health hazard to ensure corrective action has been initiated. Maintains record of occupational health-related RAC 4 or 5 hazard until appropriate corrective action is completed.

A2.1.5.2. EVALUATES NON-INDUSTRIAL BASE FACILITY. Evaluates administrative facility to determine the presence or absence of occupational health problem. Prepares appropriate report, provides recommendation for corrective action and forwards copy of survey report to appropriate base official/agency.

A2.1.6. CONSULTATION TO BASE CONTRACTING FUNCTION. Reviews, edits, and coordinates performance contract. Attends contract award meeting for coordination of industrial hygiene and environmental requirement with approved contractor. Conducts special survey of contracting activity.

A2.1.7. POTABLE WATER QUALITY PROGRAM ADMINISTRATION (AFI48-144, *SAFE DRINKING WATER SURVEILLANCE PROGRAM*):

A2.1.7.1. ASSESSES POTABLE WATER QUALITY IAW EPA RULES, THE SAFE DRINKING WATER ACT AND AFR48-144. Assesses lead and copper in water fountains and monitors lead, copper and corrosion level in potable water system. Collects and processes sample for chemical, radiological or biological analysis; prepares container, form and shipping document, boxes and mails sample. Receives and compares test result with acceptable EPA standard and notifies appropriate agencies. Investigates cause of noncompliance, resamples as necessary and reports result to proper authority.

A2.1.7.2. PERFORMS SAFE DRINKING WATER SURVEILLANCE PROGRAM (AFI48-144):

A2.1.7.2.1. PERFORMS DRINKING WATER SURVEILLANCE. Maintains records of drinking water surveillance IAW primacy requirement. Ensures laboratory performs analyses using required analytical methods. Ensures monthly bacteriological testing is being performed at representative points in the distribution system based on population served. Interprets result of water analyses and reports through Civil Engineering or Environmental Management. Implements when analysis results indicate a potential public health threat or non-compliance with applicable regulation and standard. Initiates request for waiver, exemption and reduced monitoring and conducts engineering review of repair/modification to drinking water system. Confirms installation's drinking water systems are properly classified. Submits funding requirement through Base Civil Engineering or Environmental Management.

A2.1.7.2.2. MONITORS AND APPROVES AIRCRAFT WATERING POINTS.

A2.1.7.2.3. DEPLOYS. Deploys to contingency site where potable water is of significant concern as determined by the major command (MAJCOM) surgeon or designated representative.

A2.1.7.3. MANAGES CROSS CONNECTION AND BACKFLOW PREVENTION PROGRAM. Reviews the inventory and assigns health hazard classification for cross connection using guidance established in the Uniform Plumbing Code.

A2.1.7.4. MANAGES WATER VULNERABILITY ASSESSMENT. In conjunction with CE, performs or oversees (if performed under contract) the conduct of a comprehensive, baseline Water Vulnerability Assessment (WVA) of the installation water system.

A2.1.7.5. MANAGES DRINKING WATER SANITARY SURVEY. Performs or oversees (if performed under contract or by the primacy) the conduct of a sanitary survey of the installation drinking water system IAW primacy requirements.

A2.1.8. BASE ENVIRONMENTAL POLLUTION MONITORING PROGRAM. Monitors program or manages/reviews contract.

A2.1.8.1. ASSESSES WATER POLLUTION MONITORING REQUIREMENT:

A2.1.8.1.1. UPDATES WATER POLLUTION MONITORING REQUIREMENT.

A2.1.8.1.2. PERFORMS NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) MONITORING AND OTHER WATER SAMPLING:

A2.1.8.1.2.1. PERFORMS GRAB SAMPLING. Prepares sample and form and collects sample.

A2.1.8.1.2.2. PERFORMS COMPOSITE SAMPLING. Calibrates sampling pump, measures flow on site, records result on container and collects sample.

A2.1.8.1.2.3. PERFORMS SAMPLE PREPARATION. Preserves, packages and ships sample.

A2.1.8.1.2.4. PROCESSES SAMPLE RESULT. Receives and documents result from laboratory, interprets result, conducts trend analysis and submits result to organization/agency.

A2.1.8.1.2.5. CONDUCTS NONCOMPLIANCE SAMPLE INVESTIGATION.

A2.1.8.2. PERFORMS RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) MONITORING AND TRAINING. Assists base environmental coordinator

with hazardous and non-hazardous waste through the Defense Reutilization and Marketing Office (DRMO) contractor to ensure EPA compliance. Includes ensuring paperwork is in order for DRMO contractors and drums are ready at pick up site prior to and during scheduled waste pick up.

A2.1.8.2.1. PROVIDES TRAINING ASSISTANCE.

A2.1.8.2.2. CONDUCTS COMPLIANCE SURVEY.

A2.1.8.2.3. UPDATES HAZARDOUS WASTE ANALYSIS PLAN.

A2.1.8.2.4. ASSISTS IN DEVELOPING WASTE STREAM CHARACTERIZATION.

A2.1.8.2.5. REVIEWS AND PROVIDES DATA FOR HAZARDOUS WASTE PROFILE SHEET. Completes profile sheet and/or Department of Defense (DD) Form 1348, *Supply Requisition Form*, and packages, labels and weighs hazardous material. Submits documents to DRMO. Meets contractor and signs Land Disposal Restriction (LDR) and manifest. Collects waste from shops on scheduled basis.

A2.1.8.2.6. REVIEWS WASTE DISPOSAL CONTRACT.

A2.1.8.2.7. PROVIDES MSDS TO APPROPRIATE AGENCY.

A2.1.8.2.8. PROVIDES ENVIRONMENTAL MONITORING OF UNDERGROUND STORAGE TANK IAW FEDERAL, STATE AND LOCAL REQUIREMENT.

A2.1.8.3. ADMINISTERS POLLUTION PREVENTION PROGRAM:

A2.1.8.3.1. INVENTORIES AND TRACKS REDUCTION OF AIR POLLUTANT EMISSION.

A2.1.8.3.2. INVENTORIES AND TRACKS REDUCTION OF EPA-IDENTIFIED OZONE DEPLETOR.

A2.1.8.3.3. PERFORMS OR ARRANGES FOR AIR POLLUTION EMISSION SAMPLING.

A2.1.8.3.4. ASSISTS IN DETERMINING INSTALLATION'S WASTE MINIMIZATION OPTIONS.

A2.1.8.4. ADMINISTERS BIOENVIRONMENTAL ASPECT OF INSTALLATION RESTORATION PROGRAM (IRP):

A2.1.8.4.1. PERFORMS HEALTH RISK ASSESSMENT.

A2.1.8.4.2. PROVIDES TECHNICAL ASSISTANCE TO REQUESTING AGENCY.

A2.1.8.4.3. CONDUCTS PERIODIC MONITORING OF IRP SITE IAW FEDERAL, STATE AND LOCAL REQUIREMENT.

A2.1.8.5. PERFORMS BEE SEGMENT OF ENVIRONMENTAL SAFETY AND OCCUPATIONAL HEALTH COMPLIANCE ASSESSMENT AND MANAGEMENT PROGRAM (ESOH CAMP) AUDIT:

A2.1.8.5.1. PERFORMS EXTERNAL ESOHCAMP AUDIT:

A2.1.8.5.1.1. PREPARES DATA IN SUPPORT OF ESOHCAMP AUDIT.

A2.1.8.5.1.2. ACTS AS ESCORT AND INFORMATION SOURCE DURING EXTERNAL AUDIT.

A2.1.8.5.1.3. RECOMMENDS CORRECTIVE ACTION FOR ESOHCAMP FINDING TO THE ENVIRONMENTAL PROTECTION COMMITTEE (EPC).

A2.1.8.5.1.4. REVIEWS AND VALIDATES PRELIMINARY FINDING.

A2.1.8.5.1.5. PROVIDES STATUS ON CORRECTIVE ACTION FOR EXTERNAL AUDIT FINDING.

A2.1.8.5.2. CONDUCTS BEE PORTION OF INTERNAL ESOHCAMP AUDIT:

A2.1.8.5.2.1. PROVIDES DATA TO ACTION PLAN FOR IDENTIFIED ESOHCAMP FINDING.

A2.1.8.5.2.2. PROVIDES STATUS ON CORRECTIVE ACTION FOR INTERNAL ESOHCAMP FINDING.

A2.1.8.5.2.3. CONDUCTS INTERNAL ESOHCAMP.

A2.1.8.6. PROVIDES INPUT TO COMMUNITY RIGHT TO KNOW PROGRAM, SUPERFUND AMENDMENT AND REAUTHORIZATION ACT III (SARA III). Provides usage rate of reportable chemicals and MSDS and reports chemical usage to local emergency planning committee.

A2.1.8.7. INVESTIGATES ENVIRONMENTAL INCIDENT. Investigates fish kill or chemical spill.

A2.1.8.7.1. PERFORMS SAMPLING TO DETERMINE IMPACT AND COORDINATES CORRECTIVE ACTION.

A2.1.8.7.2. MAINTAINS LIAISON WITH FEDERAL, STATE AND/OR LOCAL OFFICIAL.

A2.1.8.7.3. BRIEFS ENVIRONMENTAL PROTECTION COMMITTEE AND COMMANDER REGARDING INCIDENT. Participates as environmental protection committee member.

A2.1.8.8. PROVIDES SUPPORT TO THE ENVIRONMENTAL ASSESSMENT (EA) PROGRAM. Attends meeting as technical advisor, provides data for EA study and reviews study finding.

A2.1.8.9. REVIEWS PEST CONTROL REPORT AND PLAN.

A2.1.8.10. PERFORMS ASBESTOS MONITORING AND HEALTH HAZARD ASSESSMENT. Determines if there are immediate health risks. Provides a plan for the safe removal of asbestos containing material during normal maintenance or construction project. Completes evaluation forms, notifies shop of result and reports/makes recommendation to the AMC of result.

A2.1.8.10.1. ASSISTS IN FACILITY SURVEY.

A2.1.8.10.2. CONDUCTS FACILITY SAMPLING (BULK).

A2.1.8.10.3. CONDUCTS RISK ASSESSMENT.

A2.1.8.10.4. OVERSEES CONTRACTOR ABATEMENT PROCEDURE.

A2.1.8.10.5. PREPARES AND DISTRIBUTES REPORT.

A2.1.9. BASE RADIOLOGICAL PROTECTION PROGRAM ADMINISTRATION (AFI48-125, *THE U.S. AIR FORCE PERSONNEL DOSIMETRY PROGRAM*). Manages base radiation program. Obtains operational test equipment and performs calibration. Surveys ionizing or non-ionizing radiation source. Conducts swipe sample IAW permit. Completes survey form. Acts as the base Radiation Safety Officer (RSO).

A2.1.9.1. MANAGES AS LOW AS REASONABLY ACHIEVABLE (ALARA) PROGRAM. Assigns action level to area identified for inclusion in ALARA program. Updates base ALARA regulation and training program. Reviews work center ALARA program. Assists in updating work center operating instruction and training program. Ensures compliance and accuracy of documentation.

A2.1.9.2. MAINTAINS IONIZING RADIATION SOURCE INVENTORY. Maintains inventory of ionizing radiation source on installation. Notes addition, deletion or modification to radiation source inventory when visiting installation building. Identifies and evaluates radiation hazard to determine health hazard. Posts change to inventory.

A2.1.9.3. MAINTAIN INVENTORY OF HISTORICAL AIRCRAFT AND DISPLAYED ARTIFACTS. Performs radiological surveillance of historical aircraft and displayed artifact for public exposure assessment.

A2.1.9.4. INVESTIGATES IONIZING RADIATION INCIDENT. Interviews personnel and obtains required documentation and technical/operational data. Determines exposure level through available data, theoretical modeling and/or measurement survey. Writes and distributes report to personnel and agency. Documents case file and medical record.

A2.1.9.5. PROCESSES RADIOACTIVE MATERIAL PROCUREMENT REQUEST AND LICENSE/PERMIT. Assists user in permit application. Reviews and forwards to Radioisotope Committee through ANG/SG. Receives copy of permit/license and ensures compliance with stipulated condition. Accomplishes case file documentation.

A2.1.9.6. MONITORS CONTRACTOR-OWNED RADIOACTIVE MATERIAL USE. Reviews operation and permit.

A2.1.9.7. MONITORS RADIOACTIVE MATERIAL SHIPMENT. Determines type of isotope, activity and standard. Measures leakage and collects swipe sample. Prepares swipe sample/documentation and forwards to Air Force Institute for Occupational Health (AFIOH). Reviews result, authorizes shipment or requests repacking to meet Department of Transportation requirement and files result.

A2.1.9.8. PERFORMS RADIATION SAFETY OFFICER DUTY. Provides guidance in planning and exercise. Serves as liaison with Radioisotope Committee, Radiological Safety Committee and special interest group. Performs permit compliance inspection. Assists user in developing self-inspection program for base functional work center. Performs on-site inspection/visit. Prepares report, briefs commander, Occupational Safety and Health Council and Environmental Protection Committee. Apprises agency/organization of change.

A2.1.9.9. MANAGES THE THERMOLUMINESCENT DOSIMETRY (TLD) PROGRAM (AFOSH STD 48-148, *IONIZING RADIATION PROGRAM*). Enrolls, distributes and maintains personnel information in TLD program.

A2.1.9.10. MONITORS RADIO FREQUENCY (RF) RADIATION:

A2.1.9.10.1. MAINTAINS RF EMITTER INVENTORY. Requests data from organization using RF emitter, verifies existing inventory data, performs calculation, coordinates with Communications on new equipment purchase, updates change in form and case file and publishes inventory.

A2.1.9.10.2. PERFORMS COMMERCIAL MICROWAVE OVEN SURVEY. Visits work center and measures leakage level. Documents finding. Prepares Food and Drug Administration (FDA) Form 2536, *Microwave Oven Field Test Record*, provides copy to user and distributes copy to FDA if leakage exceeds standard.

Recommends oven be repaired or replaced and requests notification when accomplished. Performs resurvey. Maintains inventory.

A2.1.9.10.3. INVESTIGATES POTENTIAL OVEREXPOSURE TO NON-IONIZING RADIATION. Interviews personnel, obtains documentation and operating parameter, notifies supervisor and provides data, determines if overexposure was possible, performs measurement survey to determine exposure level, prepares report and forwards to Public Health and documents case file.

A2.1.9.11. MONITORS LASER RADIATION:

A2.1.9.11.1. MAINTAINS LASER INVENTORY. Requests data from organization equipped with laser, performs hazard evaluation, identifies hazard zone, determines control and prepares and distributes report.

A2.1.9.11.2. PROVIDES TECHNICAL GUIDANCE ON USE OF LASER. Investigates potential overexposure.

A2.1.10. ISSUE EXCEPTION (IEX) CODE PROGRAM ADMINISTRATION. Reviews Standard Base Supply System (SBSS) report and verifies correct IEX code.

A2.1.10.1. REVIEWS MASTER LISTING OF POTENTIALLY HAZARDOUS/TOXIC SUBSTANCES USED ON THE INSTALLATION.

A2.1.10.2. RESEARCHES ITEM COMPOSITION, TOXICITY AND NEED FOR IEX CODING. Reviews IEX 8 and 9 listing and updates shop folder. Reviews DD Form 1348 received from Base Supply and checks shop folder for usage control and required protective equipment.

A2.1.10.3. COORDINATES WITH BASE SUPPLY, CIVIL ENGINEERING AND BASE CONTRACTING CONCERNING THE IEX PROGRAM. Instructs base supply concerning the IEX code for potentially hazardous substance.

A2.1.10.4. MAINTAINS COPY. Maintains proprietary copy of the hazardous materials information system and MSDS (hard copy) library.

A2.1.10.5. PROCESSES HAZARDOUS MATERIAL REQUEST FROM WORK CENTER. Processes request using EMIS, CCS, EESOH or DOEHS IAW AFI32-7086, *Hazardous Materials Management*.

A2.1.10.5.1. LOADS APPROPRIATE MSDS INTO CCS, EMIS, ACES-EM OR EESOH AND ASSIGNS IEX CODE. Coordinates with Base Supply, Safety and the Environmental Coordinator on approval/disapproval of hazardous material.

A2.1.10.5.2. REVIEWS WORK CENTER HAZARDOUS MATERIAL AUTHORIZATION. Periodically reviews work center for currency/accuracy in EMIS or EESOH database.

- A2.1.10.5.3. IDENTIFIES HAZARDOUS MATERIAL. Identifies hazardous material IAW locally established guidance as approved by the installation Aerospace Medicine Council. Provides specific HM coding (IEX codes 8, 9, M [per regulation, M, code for respirators] and health hazard flag [HHF]) to the pharmacy and requisitioning work center.
- A2.1.10.5.4. REVIEWS AND COORDINATES HM PHARMACY POLICY CHANGE PRIOR TO IMPLEMENTATION. Assists in administrative review process and conducts pharmacy program review of HM inventory including review of product frequency use, maximum single use for each product, total annual product use, product unit of issue, quantity of product on hand, product addition/deletion, suitable product substitution, work center training program, handling/storage procedures and application of PPE/personal protective clothing (PPC).
- A2.1.11. ENVIRONMENTAL DIFFERENTIAL PAY (EDP) EVALUATION. Conducts review of existing EDP situation. Submits recommendation to EDP committee. Reviews and evaluates new EDP request.
- A2.1.12. WORKMEN'S COMPENSATION CLAIM. Investigates claim for compensation by civilian employee, requests previous records, extracts data and coordinates action with Public Health and Personnel. Analyzes data and prepares report.
- A2.1.13. BIOENVIRONMENTAL INPUT TO THE FULL SPECTRUM THREAT RESPONSE (FSTR) PLAN. Participates in planning for control of incident.
- A2.1.13.1. UPDATES AND REVIEWS INPUT TO DISASTER PLAN:
- A2.1.13.1.1. UPDATES AND REVIEWS INPUT TO FSTR.
- A2.1.13.1.2. UPDATES AND REVIEWS INPUT TO BASE SPILL PLAN.
- A2.1.13.2. RESPONDS TO ACTUAL DISASTER OR PRACTICE EXERCISE. Responds as technical expert to real world and exercise spill response. Responds as technical expert during Single Integrated Operational Plan (SIOP) exercise in support of aircraft deployment resulting from nuclear incident.
- A2.1.13.3. MAINTAINS EMERGENCY RESPONSE EQUIPMENT.
- A2.1.14. BIOENVIRONMENTAL PROGRAM PLAN:
- A2.1.14.1. UPDATES FIVE-YEAR EQUIPMENT REPLACEMENT PLAN AND UTILIZATION OF TEAM AEROSPACE FUNDING REQUIREMENT (TAFR).
- A2.1.14.2. UPDATES BIOENVIRONMENTAL PROGRAM MANAGEMENT PLAN.
- A2.1.15. QUANTITATIVE FIT TEST (QNFT) PROGRAM. Ensures base personnel on mobility status have been identified and fit tested for chemical gas mask. Manages

basewide database and report to MAJCOM representative on status of program. Trains clinic personnel on Concepts of Operations (CONOPS) training requirement in Air Force Manual (AFMAN)10-2602, *Nuclear, Biological, Chemical and Conventional (NBCC) Defense Operations and Standards*.

A2.1.16. MEETING:

A2.1.16.1. ATTENDS FACILITIES BOARD MEETING.

A2.1.16.2. ATTENDS FEDERAL EMPLOYEE COMPENSATION BOARD MEETING.

A2.1.16.3. ATTENDS HAZARDOUS MATERIAL MANAGEMENT PHARMACY MEETING.

A2.1.16.4. ATTENDS OCCUPATIONAL HEALTH WORKING GROUP MEETING.

A2.1.17. BIOENVIRONMENTAL TECHNICAL REFERENCE LIBRARY. Maintains and updates professional publications.

A2.1.18. DEPLOYED UNIT SUPPORT. Provides bioenvironmental engineering support/training to deployed unit.

A2.1.19. COMMITTEE/TEAM MEMBER PARTICIPATION:

A2.1.19.1. PARTICIPATES AS MEMBER OF HEALTH AND SAFETY COUNCIL.

A2.1.19.2. PARTICIPATES AS MEMBER OF CONFINED SPACE TEAM.

A2.1.20. CERTIFICATION. Maintains technical certification of competency (e.g., lead based paint, asbestos, Hazardous Waste Operations and Emergency Response (HAZWOPER) and Emergency Planning and Community Right-To-Know Act (EPCRA) IAW specific regulatory requirements of State or Federal EPA and OSHA standards.

A2.1.21. TRAINING LESSON PLAN DEVELOPMENT. Develops training lesson plan (i.e., HAZCOM, BEE/Public Health cross-training, respiratory protection, etc.)

A2.1.22. TEMPORARY DUTY (TDY) TRAVEL. Performs mission-related travel.

A2.1.23. UNIT TRAINING ASSEMBLY (UTA). Performs preparation and scheduling tasks associated with training activities for drill-status guardsmen.

A2.2. INDIRECT. Indirect work involves those tasks that are not readily identifiable with the work center's specific product or service. The major categories of standard indirect work are: Administers Civilian, Officer, and Enlisted Personnel; Directs Work Center Activity; Provides Administrative Support; Prepares for and Conducts/Attends Meeting; Administers Training; Manages Supplies; Maintains Equipment; and Performs Cleanup.

Attachment 3

MANPOWER TABLE

A3.1. Standard Manpower Table.

STANDARD MANPOWER TABLE							
WORK CENTER/FAC Bioenvironmental Engr/531100		APPLICABILITY MANHOUR n/a					
Air Force Specialty Title	AFSC	Grade	Manpower Requirement				
Bioenvironmental Engineering	4B0X1	Civ	2	3			
Total			2	3			

NOTE. AFSCs may be adjusted (e.g., 043E3A) at the discretion of the Commander.

Attachment 4**VARIANCE****Base Operating Support**

A4.1. TITLE: Positive Mission Variance for Base Operating Support.

A4.2. DEFINITION:

A4.2.1. The support of an Air National Guard base and a significantly large number of tenant units.

A4.2.2. The host (base operating support) responsibilities to the ANG and tenant units drive a large number of Industrial Hygiene surveillance requirements.

A4.2.3. Future exceptions may include significant increases in mission requirements, base consolidations or consolidation of wings under the Base Realignment and Closure Committee (BRAC) requirements. Reevaluation will be on a case-by-case basis.

A4.3. IMPACT: Y = 1.

A4.4. APPLICABILITY: The variance applies to the 127WG MI.

Attachment 5

VARIANCE

Northeast Tanker Task Force Support

A5.1. TITLE: Positive Mission Variance for Northeast Tanker Task Force support.

A5.2. DEFINITION: The support of the Northeast Tanker Task Force resulting in increased exposure rates with associated increase in regulatory sampling.

A5.3. IMPACT: Y = 1.

A5.4. APPLICABILITY: The variance applies to the 101ARW ME.